REMARKS

Claims 1-35, 37-63, 65-75 are pending. Claims 36 and 64 are cancelled. Claims 1-29, 33-35 and 37-63 stand withdrawn. Claims 30-32 and 65-75 stand rejected.

Applicants confirm that the claim amendments presented in the Amendment and Reply dated September 7, 2010 were not entered as the proposed amendments allegedly require further consideration and a new search. Thus, Applicants submit the instant claim amendments along with a Request for Continued Examination. Specifically, Applicants present the following claim amendments:

- Claim 30 is amended to recite that the one or more active ingredient comprises milbemycin oxime. Claim 30 is further amended to incorporate claim 32 as originally presented.
- Claim 32 is amended to recite that the extruder is cooled to a temperature of 5-10°C. Support for this amendment is found throughout the specification including, but not limited to, page 31 (last line) of the specification, as filed.
- Claim 65 is amended to recite that the chewable veterinary composition comprises at least 20% (w/w) of a natural meat flavoring. Support for this amendment is found throughout the specification including, but not limited to, Examples 1-3.
- Claim 69 is cancelled.

No new matter is presented. Consideration of the newly amended claims is respectfully requested.

Rejection of Claims 30-32 Under 35 U.S.C. §103(a)

Claims 30-32 stand rejected under 35 U.S.C. §103(a) as being unpatentable over **van Lengerich** (U.S. Patent No. 6,500,463) in view **Kalbe et al.** (CA 2,413,698). The Examiner contends that one skilled in the art would have been motivated to use the meat flavorings of **Kalbe et al.** in the formulations of **van Lengerich** to arrive at the instantly claimed method.

Applicants respectfully traverse the rejection of claims 30-32 on at least the following grounds: (1) **van Lengerich** and **Kalbe et al.** do not teach or suggest the instantly claimed method; (2) one of ordinary skill in the art would not have been motivated to combine **van Lengerich** and **Kalbe et al.** to arrive at the instantly claimed method; and (3) the combination of **van Lengerich** and **Kalbe et al.** cannot be combined to result in the instantly claimed method.

The instant claims are directed to a method for the production of a highly palatable ductile chewable veterinary composition comprising (A) one or more active ingredients

comprising milbemycin oxime, (B) meat flavoring, (C) partially gelatinized starch, (D) softener, and (E) water in an amount of ≤9%. The highly palatable ductile chewable veterinary composition includes at least one active ingredient that is not decomposed by the interaction with other ingredients, including the meat flavoring and excess water, even at elevated temperatures. The claimed method results a product that is acceptable to animals from the point of view of its physical structure (i.e., a ductile chewable composition). The goal of producing an acceptable product has been achieved by subjecting a formulation to a cold extrusion process with constant cooling so that the temperature at the extruder tip does not exceed 40°C. The consistency of the composition is not changed during this cold extrusion process. Accordingly, the initial composition and consistency is maintained during the extrusion process, and the ductile chewable product is obtained in a very reproducible manner depending on the composition employed.

Van Lengerich does not teach or suggest the instantly claimed method for the following reasons. First, **van Lengerich** relates to the encapsulation of active ingredients into a matrix to obtain discrete shelf-stable particles. Specifically, **van Lengerich** discloses a matrix component comprising at least one plasticizable matrix material and a matrix component which is substantially non-plasticizable for encapsulation of the active ingredient. The **van Lengerich** composition is plasticized by means of a suitable plasticizer (e.g., excess water) the concentration of which is far beyond the percentage recited in claim 30. The plasticizable matrix material is then dried in order to form a glassy coat around the active ingredient (see, for example, **van Lengerich** at column 11, lines 16-31; column 20, lines 53-55). The final product exhibits a non-chewable texture (see column 24, lines 10-14). Accordingly, while the presently claimed compositions are highly palatable ductile and chewable, the compositions disclosed by **van Lengerich** are glassy (i.e., non-ductile) and non-chewable. In addition, the compositions disclosed by **van Lengerich** contain high water (plasticizer) concentrations needed for the plasticizing step, which are outside the scope of the present claims. No plasticizing step (or any other transformation step) is taught or suggested. In fact, such a step would be counter to the purpose of achieving a glassy coat. Instead, **van Lengerich** discloses that mixing the ingredients and extruding the resulting mixture leads to the final product.

Secondly, **van Lengerich** discloses hundreds of active ingredients (columns 15-19) but none of the active ingredients are capable of being incorporated in a composition at the temperatures of the instantly claimed method. In fact, **van Lengerich** fails to teach or suggest the use of an active ingredient that comprises milbemycin oxime. The list disclosed in **van Lengerich**, by contrast, confirms that **van Lengerich** is directed to human medicines and not to

veterinary medicinal compositions. This position is further confirmed by the fact that **van Lengerich** does not teach or suggest the utilization of a meat flavor. Flavors are usually a main ingredient of a veterinary medicine making up to 30% of the entire formulation. Accordingly, providing a chewable composition with acceptable physical properties becomes an even more difficult challenge to one skilled in the art, especially if 30% of the formulation is already occupied by the meat flavor.

Lastly, in contrast to the instant method, **van Lengerich** discloses an extrusion method that is carried out at room temperature with low shear. Thus, **van Lengerich** does not teach or suggest how to achieve low extrudate temperatures while applying high mechanical forces. According to the instantly claimed methods, regular shear forces are applied in order achieve proper mixing of the components and create the desired product shape. The extruder is cooled below room temperature (claim 30) or to 5-10°C (claim 32).

Kalbe et al. do not cure the deficiencies of **van Lengerich**. Specifically, **Kalbe et al.** disclose the manufacture of extruded shaped veterinary articles according to a process which is common for the manufacture of animal food. The process disclosed in **Kalbe et al.** includes extruding a mixture containing the ingredients together with non-gelatinized starch at high temperatures (120°C or above). During the extrusion process the starch is baked and a cookie is produced. Accordingly, the initial composition is again chemically/physically changed, either by plasticizing or by baking at elevated temperatures. In addition, the depsipeptides (i.e., the active ingredients) are obviously temperature-stable and do not suffer from interactions with other components of the composition. As noted, a range of temperatures is provided in each of the cited references, which emphasizes the fact that neither reference appreciates the need for specific temperature control.

Contrary to the methods disclosed in the **van Lengerich** and **Kalbe et al.**, the initial formulation of the instantly claimed methods is not changed during the presently claimed extrusion method. As a result, the instant product is obtained in a more reproducible manner.

Kalbe et al. also fail to teach or suggest the one or more active ingredients which comprise milbemycin oxime. Furthermore, the disclosed **Kalbe et al.** process cannot be used to produce the products produced by the instantly claimed method because the one or more instant active ingredients which comprise milbemycin oxime are temperature-sensitive. If employed in the methods of **Kalbe et al.**, the one or more active ingredients which comprise milbemycin oxime would be decomposed to a degree below a pharmaceutically acceptable level. Thus, **Kalbe et al.** do not cure the deficiencies of **van Lengerich**.

In view of the aforementioned differences between the cited references the instant claims, one of ordinary skill in the art would not have been motivated to combine **van Lengerich** and **Kalbe et al.** to arrive at the instantly claimed method and the combination of **van Lengerich** and **Kalbe et al.** cannot be combined to result in the instantly claimed method. The **Lengerich** and **Kalbe et al.** references relate to two entirely different concepts. **Van Lengerich** discloses an extrusion method that regulates temperature by reducing the shear forces and uses at least two different matrix materials which are kept at relatively low temperature. In contrast, **Kalbe et al.** disclose a product based on non-gelatinized starch as a matrix component which is treated at high temperature in order to effectuate a chemical conversion of the matrix component during extrusion. Furthermore, **van Lengerich** discloses a non-chewable product whereas **Kalbe et al.** disclose a chewable product. Thus, based on these differences, one of ordinary skill would not have been motivated by **van Lengerich** and **Kalbe et al.** in the development of the instantly claimed methods. Further, the disclosures of **van Lengerich** and **Kalbe et al.** cannot be combined to result in the instantly claimed method.

Applicants respectfully request withdrawal of the rejection of claims 30-32.

Rejection of Claims 30-32 and 65-75 Under 35 U.S.C. §103(a)

Claims 30-32 and 65-75 stand rejected under 35 U.S.C. §103(a) as being unpatentable over **Huber et al.** (WO 03/030653) in view of **Huron et al.** (WO 2004/014143). The Examiner contends that it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of **Huber et al.** and **Huron et al.** and have the whole extrusion process at no time exceed 40°C, use a pre-gelatinized starch, and use the various combinations of the active ingredients.

Huber et al. disclose a process where the reaction mixture is pre-conditioned using heat or extruded at elevated temperature in order to effectuate a chemical conversion of the matrix component during extrusion. Thus, process disclosed by **Huber et al.** differs from the instantly claimed method in at least three aspects. First, **Huber et al.** disclose the use of a non-gelatinized starch (instead of partially gelatinized starch) as starting material and a process that results in a physical and chemical transformation of the starting composition to the final product. Secondly, while **Huber et al.** disclose 20°C as lower limit for preconditioning and extrusion, such a low temperature would not function as proposed by **Huber et al.** because the purpose of the disclosed pre-conditioning step is "to initially moisturize and partially cook the starting material" (see WO 03/030653, page 6, last paragraph). A temperature of 20°C will definitely not serve this purpose. Furthermore, the use of higher temperatures is confirmed by the disclosed

preferred temperature range which is 90-97°C and the extrusion which preferably takes place at 65-120°C. Thirdly, **Huber et al.** disclose the use of water in a high concentration (10-60%; preferably 21-23% - see page 6, lines 25-31). The application of water at such a concentration during the process is clearly outside the claimed range. As a result, the process and associated conditions as set forth in **Huber et al.** are not suitable for the one or more active ingredients comprising milbemycin oxime as set forth in the instantly claimed method. Thus, the conditions disclosed in **Huber et al.** would render the instantly claimed method inoperable.

Huron et al. do not cure the deficiencies of **Huber et al.** Applicants first note that **Huron et al.** is not available as prior art because **Huron et al.** published on February 19, 2004 and the instant application claims priority to EP 030172522, filed July 30, 2003. Assuming, *arguendo*, **Huron et al.** was available as prior art for purposes of 35 U.S.C. §103(a), the rejection remains improper. Unlike **Huber et al.**, **Huron et al.** do not disclos, teach or even suggest an extrusion process whatsoever. Thus, **Huron et al.** cannot cure the deficiencies of **Huber et al.** Furthermore, the methods of **Huron et al.** are based on a heat treatment and do not teach or suggest one or more active ingredients comprising milbemycin oxime as set forth in the instantly claimed method. As a result, one of ordinary skill would not have been motivated to combine the grossly divergent methodologies of **Huber et al.** and **Huron et al.** Further, the disclosures of **Huber et al.** and **Huron et al.** cannot be combined to result in the instantly claimed method.

Withdrawal of the rejection is respectfully requested.

CONCLUSION

The claims are believed in condition for allowance and Applicants respectfully request such action. The Examiner is invited to contact Applicants' undersigned representative with any questions or comments for expeditious handling.

Respectfully submitted,

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